

What is claimed is:

1. A compressor comprising:

a housing having a front and a rear, the compressor being driven via the front;
a cylinder head or pressure cover at the rear of the housing;
a drive shaft for a drive mechanism of the compressor, the drive shaft and drive mechanism being at least partially located in the housing;
radial bearings for the drive shaft being located at the front and rear of the housing; and
at least one axial bearing for the drive shaft, the axial bearing being located in the cylinder head or pressure cover.

2. The compressor as recited in claim 1 further comprising a valve plate and at least one cylinder in the housing, the axial bearing being positioned so that the axial forces exerted by the cylinder on the valve plate and the cylinder head or pressure cover are only transferred by the cylinder head or pressure cover through the valve plate to the axial bearing so as to free the housing and other parts of the cylinder head or pressure cover, including connecting parts, from axial dynamic stress produced by work of the compressor.

3. The compressor as recited in claim 1 further comprising a valve plate, wherein the axial bearing is positioned so that axial tensile forces in the drive shaft press the cylinder head or pressure cover against the valve plate and the cylinder block via the axial bearing.

4. The compressor as recited in claim 1 wherein the axial bearing is accessible from an outside after assembly of the drive mechanism.

5. The compressor as recited in claim 1 wherein pressure cover or cylinder head has a cylindrical recess and the axial bearing is positioned in the cylindrical recess.

6. The compressor as recited in claim 1 wherein the axial bearing has an adjustable axial position with respect to the drive shaft.
7. The compressor as recited in claim 6 wherein the axial position between the axial bearing and drive shaft adjusts the drive shaft in relation to a top dead center of the drive mechanism.
8. The compressor as recited in claim 6 further comprising a shaft washer, the axial bearing being adjustable by threads between the shaft and a shaft washer, an outer surface of the drive shaft having external threads and the bore in the shaft washer having internal threads.
9. The compressor as recited in claim 8 wherein the threads between the drive shaft and shaft washer exhibit play.
10. The compressor as recited in claim 9 wherein the threads permit angular adjustability between the drive shaft and the shaft washer.
11. The compressor as recited in claim 9 wherein the play compensates for radial deflections of the drive shaft, a function of the axial bearing not being impaired by the radial deflections.
12. The compressor as recited in claim 8 wherein a thread clearance between the drive shaft and shaft washer compensates for an angle error caused by a radial deflection of the drive shaft and the axial bearing.
13. The compressor as recited in claim 6 wherein after adjustment, the threads are secured against turning from a set angle position by a securing device.

14. The compressor as recited in claim 1 wherein the compressor is an axial piston compressor, and the drive mechanism is an axial piston drive mechanism for aspirating and compressing a coolant.

15. The compressor as recited in claim 1 wherein the drive shaft is driven by a pulley mechanism located outside the housing at the front.